Table definition

Use this sheet to design a table in a database. For more information see pages 150–2 and 161–2 in the Student Book.

- List all the fields in the Fieldname column.
- Underline the fieldname of the primary key field.
- Decide on the data type for each field such as text, number or date.
- Write a brief description for each field, explaining what it is for.
- Some fields should have a validation check. For those fields write down the validation rule that you should use. Also write in the validation text that will be displayed if the user enters invalid data.

Name of table:

Underline the fieldname of the primary key field .

Fieldname	Data type	Description	Validation rule	Validation text

Relationship between two tables

Use this worksheet to design the relationship between two tables in a relational database.

Name of database:

- Complete this sentence, by placing the name of one table in each blank:

  For ONE _____ (Table 1) **there are MANY** _____ (Table 2).

- Fill in the names of the tables in the grids below.
- Fill in the fieldnames for each table.
- Underline the primary key in each table.

Name of Table 1:

Name of Table 2:

- Add the name of the primary key field in Table 1 to the end of the list of fields in Table 2. This is now the *foreign key* in Table 2.
- Draw an arrow from the primary key in Table 1 to the foreign key in Table 2. This is the *relationship* between the two tables.

Example

Four GP doctors work at a health centre. Each doctor has a list of around 2000 patients.

For ONE Doctor (Table 1) **there are MANY Patients** (Table 2).

Name of Table 1: DOCTOR
Doctor code
Doctor Surname
Doctor Forename

Name of Table 2: PATIENT
Patient number
Patient Surname
Patient Forenames
Patient Address
Patient Postcode
Patient Telephone
Doctor code

Database design summary

Use this sheet to keep a note of all the tables, queries, forms and reports that you have used in your database.

Name of database:

Tables	Description

Queries	Description	* Based on

Forms	Description	* Based on

Reports	Description	* Based on

* In this column, enter the tables or queries that the item takes its data from.

Practical case study

King of Hearts scenario

Naomi Rees started making costumes some years ago for her daughter's school shows. Friends asked to borrow these for fancy dress parties and she began to realise that here was an opportunity to start a business hiring out costumes for adults as well as for children.

In 2001 she opened King of Hearts in a small shop in Kingsmond. Naomi had to work very long hours in the first year: she had to build up her stock, most of which she made herself, as well as serve six days a week in the shop. The business is now thriving and Naomi has been able to take on John as an assistant. John largely serves customers in the shop, whilst Naomi divides her time between dealing with all the paperwork and designing new costumes. She still sews the more straightforward designs, but she has found a homeworker, called Jane, who turns the more complex designs, including the whole-body animal costumes, into reality.

King of Hearts is beginning to supply costumes to local theatre groups. Naomi is sure that this presents an opportunity for growth.

Naomi has never had time to learn how to use a computer properly, but she recognises what a valuable business tool it could be. At present all her business data is recorded by hand.

She does want to expand the business but wants to progress carefully. As a first stage she has decided to install a computer and she has asked you to develop a database for her. She requires a database that will, at the least, manage the hiring of costumes for her, but she would be very pleased if the database could offer other features as well.

Task

Design and implement a database with at least two tables that will hold details about stock (the costumes) and the customers who hire them.

- Create the tables, and select suitable data types for each field.
- Set up validation procedures for fields where appropriate.
- Identify primary and foreign key fields.
- Set up the relationships between tables.
- Design one or more user-friendly forms for inputting the data.
- Use the forms to enter some sample data (e.g. about 20 costumes and 6 customers).
- Design at least one query that will identify all the stock that is currently available for hire.
- Produce a report that lists all the stock, sorted alphabetically by the name of the costume.
- Produce any further reports (based on appropriate queries) that would be useful to the business.

User guide checklist

Use this worksheet to check that you have included everything in a user guide.

This lists the **minimum** content – you can, of course, include extra information.

Does my user guide include ...	✓
contents page?	
purpose of the database?	
sample input forms?	
advice on how to enter new data?	
advice on how to generate reports?	
sample reports?	

Is my user guide ...	✓
user-friendly?	
well presented?	
fit for its purpose?	

Evaluation checklist

Use this worksheet to check that you have included everything in your evaluation of a database that you have created.

This lists the **minimum** content of the evaluation – you can, of course, include extra information.

Does my evaluation …	✓
explain how the database meets the requirements?	
explain the benefits of the database to the client/organisation?	
describe the problems I encountered when designing and implementing the database?	
describe how I solved those problems?	
assess how easy the database is to use?	
describe any limitations in the final version of the database?	
explain how the database could be improved?	